WHAT IS CLAIMED IS:

1. An isolated nucleic acid molecule engineered to comprise all or a portion of at least two Ter-sites.

2. The nucleic acid molecule of claim 1, wherein the nucleic acid comprises an origin of replication and the Ter-sites are arranged with respect to the origin of replication such that the sequence between the two Ter-sites is not replicated.

3. The nucleic acid molecule of claim 1, wherein the molecule comprises all or a portion of a TerB site.

4. The nucleic acid molecule according to claim 2, wherein the nucleic acid molecule is selected from a group consisting of plasmids, transposons, BACs, YACs, and phages.

5. The nucleic acid molecule according to claim 1, wherein the molecule is a linear molecule comprising all or a portion of a Ter site capable of being bound by a Ter-binding protein at each end.

6. The molecule according to claim 5, further comprising one or more sequences selected from a group consisting of recombination sequences, restriction enzyme recognition sequences, origins of replication, selectable marker sequences.

7. A modified Ter-binding protein.

8. The protein according to claim 7, wherein the Ter-binding protein comprises a Tus protein or an RTP.

9. The protein according to claim 7, wherein the modification comprises at least one polypeptide.

10. The protein according to claim 7, wherein the modification is selected from a group consisting of green fluorescent protein, alkaline phosphatase, horseradish peroxidase, beta-galactosidase, luciferase and beta-glucuronidase.

11. The protein according to claim 7, wherein the modification comprises at least one fluorescent molecule.

12. The protein according to claim 7, wherein the modification comprises at least one chromophore.

13. A solid support comprising at least one oligonucleotide that comprises all or a portion of a Ter site.

14. A solid support according to claim 13, wherein the solid support is a non-biological material.

15. A solid support according to claim 13, wherein the oligonucleotide is capable of forming a stem-loop or hairpin.

16. A solid support according to claim 15, wherein a duplex portion of a tem-loop or hairpin comprises a Ter-site.

17. A solid support comprising a Ter-binding protein.

18. A solid support according to claim 17, wherein the solid support is a non-biological material.

19. A solid support according to claim 17, wherein the Ter-binding protein is Tus or RTP.

20. A method for directional cloning, comprising:

providing a nucleic acid molecule comprising one or more Ter-sites or portions thereof;

providing a vector molecule comprising one or more Ter-sites or portions thereof;

inserting the nucleic acid molecule into the vector molecule; and

selecting the vector molecule comprising the nucleic acid molecule in the desired orientation.

21. The method according to claim 20, wherein the selecting step comprises transfecting the vector molecule into a host cell, wherein the host cell expresses a Ter-binding protein.

22. The method according to claim 21, wherein the Ter-binding protein is Tus or RTP.

23. The method according to claim 20, wherein the selecting step comprises inhibition of replication of the vector molecule comprising the nucleic acid molecule in an undesired orientation.

24. The method according to claim 20, wherein the Ter-site or sites in the nucleic acid molecule and the Ter-site or sites in the vector are partial Ter-sites.

25. A method for attaching a nucleic acid to a solid support, comprising:

attaching one or more Ter-binding proteins to a solid support;

contacting the Ter-binding protein with a first nucleic acid, said nucleic acid comprising a Ter-site.

26. The method according to claim 25, wherein the Ter-binding protein is a Tus protein or RTP.

27. The method of claim 25, further comprising contacting the first nucleic acid with a second nucleic acid.

28. A method of improving the transfection efficiency of a nucleic acid, comprising:

providing a Ter-site in the nucleic acid; and

contacting the nucleic acid with a Ter-binding protein.

29. The method according to claim 28, wherein the Ter-binding protein is a modified Ter-binding protein.

30. The method according to claim 29, wherein the Ter-binding protein comprises a receptor binding ligand.

31. The method according to claim 29, wherein the Ter-binding protein comprises a cellular targeting sequence.

32. The method according to claim 29, wherein the Ter-binding protein comprises a cell surface binding component.

33. The method according to claim 31, wherein the cellular targeting sequence is a nuclear localization sequence.

34. A composition comprising a linear nucleic acid molecule according to claim 1, further comprising a Ter-binding protein.

35. A composition according to claim 34, wherein the Ter-binding protein is a Tus protein or RTP.

36. A method for improving the stability of a linear nucleic acid molecule *in vivo*, comprising:

providing a linear nucleic acid molecule, the nucleic acid molecule comprising one or more Ter-sites;

contacting the nucleic acid with a Ter-binding protein to form a stable nucleic acid-protein complex; and

introducing the stable nucleic acid-protein complex into a host cell, wherein the complex is more stable than the nucleic acid transfected alone.

37. The method according to claim 36, wherein said host cell expresses a Ter-binding protein.

38. A method according to claim 36, wherein the linear nucleic acid comprises all or a portion of one or more genes.

39. A method for detecting a biological molecule, comprising:

contacting a biological molecule with a reagent, said reagent comprising a nucleic acid portion and a portion that is capable of forming a specific complex with the biological molecule to form a detection mixture;

contacting the detection mixture with a nucleic acid binding protein comprising a detection molecule, wherein the nucleic acid binding protein specifically binds to the nucleic acid portion of the reagent; and

determining the presence or absence of the detection molecule in the detection mixture, wherein presence of the detection molecule correlates to presence of the biological molecule and absence of the detection molecule correlates to absence of the biological molecule.

40. The method according to claim 39, wherein the nucleic acid portion of the reagent comprises a Ter-site.

41. The method according to claim 39, wherein the nucleic acid binding protein is a Ter-binding protein.

42. The method according to claim 39, wherein the detection molecule is selected from the group consisting of radiolabels, epitopes, haptens, mimetopes, affinity tags, aptamers, chromophores, fluorophores and enzymes.

43. The method according to claim 39, wherein the detection molecule is selected from the group consisting of green fluorescent protein, horseradish peroxidase, alkaline phosphatase, beta galactosidase, beta glucuronidase and luciferase.

44. A composition comprising a Ter-binding protein attached to a solid support.

45. The composition of claim 44, wherein the solid support is a non-biological material.

46. The composition according to claim 44, wherein the Ter-binding protein is Tus or RTP.

47. The composition according to claim 44, wherein the solid support is a bead.

48. The composition according to claim 44, wherein the solid support is a chromatography medium.

49. The composition according to claim 44, wherein the solid support is a filter or membrane.

50. A method for separating a nucleic acid containing a Ter-site from a mixture, comprising:

contacting the nucleic acid with a composition comprising a Ter-binding protein, wherein the Ter-binding protein binds to the Ter-site; and

separating the bound nucleic acid from the mixture.

51. A method according to claim 50, wherein the Ter-binding protein is attached to a solid support.

52. A method according to claim 50, wherein the Ter-binding protein is Tus or RTP.

53. A method according to claim 50, wherein the mixture comprises at least on nucleic acid that is not bound by Ter-binding protein.

54. A kit comprising a nucleic acid comprising at least two components selected from a group consisting of a nucleic acid molecule engineered to comprise all or a portion of at least two Ter-sites, one or more Ter-binding protein, one or more nucleotides, one or more DNA polymerases, one or more reverse transcriptases, one or more suitable buffers, one or more primers, instructions, and one or more terminating agents.

55. A method of juxtaposing a Ter site on a nucleic acid molecule with a second site on the nucleic acid molecule, comprising:

providing a nucleic acid molecule having a Ter-site;

contacting the nucleic acid with a Ter-binding protein in functional association with an enzyme capable of translocating along the nucleic acid molecule; and

conducting a reaction that causes the enzyme to translocate, thereby juxtaposing the Ter-site and the second site.

56. The method of claim 55, wherein the nucleic acid comprises a promoter in proximity to the Ter-site and the enzyme is a polymerase.

57. A method of cloning, comprising;

providing a linear vector comprising a portion of a Ter-site on each end;

ligating a nucleic acid of interest with the vector to form a ligation mixture, wherein vectors that do not ligate with a nucleic acid reform a functional Ter -site; and

introducing the ligation mixture into host cells, wherein host cells that receive a vector with a functional Ter-site do not replicate the vector.